REMARKS

1. Declaration

The Office Action has indicated that the Declaration is defective. A substitute Declaration is being sought and will be filed when executed.

2. Restriction

The Office Action requires restriction to one of two identified groups of claims:

I. Claims 37 – 39 and 53 – 57; and

II. Claims 40 and 58 – 61.

Applicants affirm the election of Group I without traverse and have accordingly canceled the claims of Group II without prejudice or disclaimer.

3. Claim Rejections

Claims 37 – 39 and 53 – 57 have been examined. Claims 37 and 39 stand rejected under 35 U.S.C. §102(b) as anticipated independently by U.S. Pat. No. 5,061,838 ("Lane") and U.S. Pat. No. 5,433,836 ("Martin") and under 35 U.S.C. §102(e) as anticipated by U.S. Pat. No. 6,150,628 ("Smith); Claim 38 stands rejected under 35 U.S.C. §103(a) as unpatentable independently over Lane in view of Smith and over Martin in view of Smith; and Claims 54 – 57 stand rejected under 35 U.S.C. §103(a) as unpatentable independently over Lane in view of U.S. Pat. No. 3,462,622 ("Cann"), JP 62-126533 ("Kitamura"), and U.S. Pat. No. 6,418,874 ("Cox"), over Martin in view of Cann, Kitamura, and Cox, and over Smith in view of Cann, Kitamura, and Cox.

Independent Claim 37 has been amended to recite aspects of the invention more particularly, including recitations that embrace the functionality of the claimed system as an ion-implantation system. Support for the amendments is provided in the Application at, *e.g.*, p. 21, l.

32 – p. 22, l. 12 and at, *e.g.*, p. 21, ll. 10 – 12. The amendments clarify that the system includes an ion source chamber with elements that cause an ion beam to be ejected from an ion source chamber in motion essentially along a center line of a toroidal plasma generator. The "center line" has moreover been defined more precisely in terms of the theta symmetry of the plasma generated by the toroidal plasma generator. The Application explains that such a configuration advantageously provides an initial transport of plasma that allows greater extraction of ions over a wider range of extraction voltages, both reducing implantation times and increasing throughput (*id.*, p. 22, ll. 7 – 12).

While each of Lane, Martin, and Smith include some disclosure related to toroidal plasma generators, none of them teaches or suggests the combination now recited in amended Claim 37. They consequently fail to recognize advantages that result from the claimed configuration to provide initial plasma transport in an ion-implantation system.

Examination of the claims as amended is accordingly requested.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 303-571-4000.

Respectfully submitted,

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